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Comptroller of the Currency  
Administrator of National Banks

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Washington, DC 20219

## **OCC's Quarterly Report on Bank Trading and Derivatives Activities First Quarter 2011**

### **Executive Summary**

- U.S. commercial banks reported trading revenues of \$7.4 billion in the first quarter, 10% lower than \$8.3 billion in the first quarter of 2010. Trading revenues in the first quarter of 2011 were 113% higher than in the fourth quarter of 2010.
- Trading risk exposure, as measured by value-at-risk (VaR), has declined for each of the five major dealers on a year-over-year basis. Aggregate average VaR at these banking companies has fallen 21%, from \$852 million in the fourth quarter of 2010, to \$677 million.
- Credit exposure from derivatives decreased in the first quarter. Net current credit exposure fell 6% or \$23 billion from the fourth quarter of 2010, to \$353 billion.
- The notional value of derivatives held by U.S. commercial banks increased \$12.8 trillion, or 5.5%, from the fourth quarter of 2010 to \$244 trillion. The notional value of derivatives is 12.7% higher than a year ago.
- Derivative contracts remain concentrated in interest rate products, which comprise 82% of total derivative notional values. Credit derivatives, which represent 6.1% of total derivatives notionals, increased 5.3% to \$14.9 trillion.

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The OCC's quarterly report on trading revenues and bank derivatives activities is based on Call Report information provided by all insured U.S. commercial banks and trust companies, reports filed by U.S. financial holding companies, and other published data.

A total of 1,047 insured U.S. commercial banks reported derivatives activities at the end of the first quarter, a decrease of 23 banks from the prior quarter. Derivatives activity in the U.S. banking system continues to be dominated by a small group of large financial institutions. Five large commercial banks represent 96% of the total banking industry notional amounts and 83% of industry net current credit exposure.

The OCC and other supervisors have examiners on-site at the largest banks to continuously evaluate the credit, market, operation, reputation, and compliance risks of bank derivatives activities. In addition to the OCC's on-site supervisory activities, the OCC continues to work with other financial supervisors and major market participants to address infrastructure issues in OTC derivatives, including development of objectives and milestones for stronger trade processing and improved market transparency across all OTC derivatives categories.

### **Revenues**

Insured commercial banks reported \$7.4 billion in trading revenues in the first quarter, 10% lower than \$8.3 billion in the first quarter of 2010, but 113% higher than \$3.5 billion in the fourth quarter of 2010. First quarter 2011 revenues were the third highest on record, trailing only the first quarters of both 2009 and 2010. Typically, trading revenues in the first quarter are the strongest of the year, as business demand and trading volume increase from the seasonally slow year-end period. Credit adjusted values of derivative payables and receivables had a minimal impact on trading revenues in the first quarter. Adjustments to the fair value of

derivative receivables and payables, which reflect changes to both bank and counterparty credit spreads, were volatile, as evidenced in prior quarters and during the financial crisis. These adjustments can also have a material impact on overall trading revenues, especially when trading results are weak.

Relative to the fourth quarter, strong first quarter revenue was the result of a sharp rebound in credit trading revenues, which increased \$2.2 billion (457%) to \$1.7 billion. Interest rate and FX trading are closely aligned, as dealers often use interest rate contracts to hedge FX risk. Therefore, it is useful to view these categories together. Combined interest rate and FX revenues of \$4.6 billion in the first quarter were \$1.2 billion (37%) higher than \$3.4 billion in the fourth quarter.

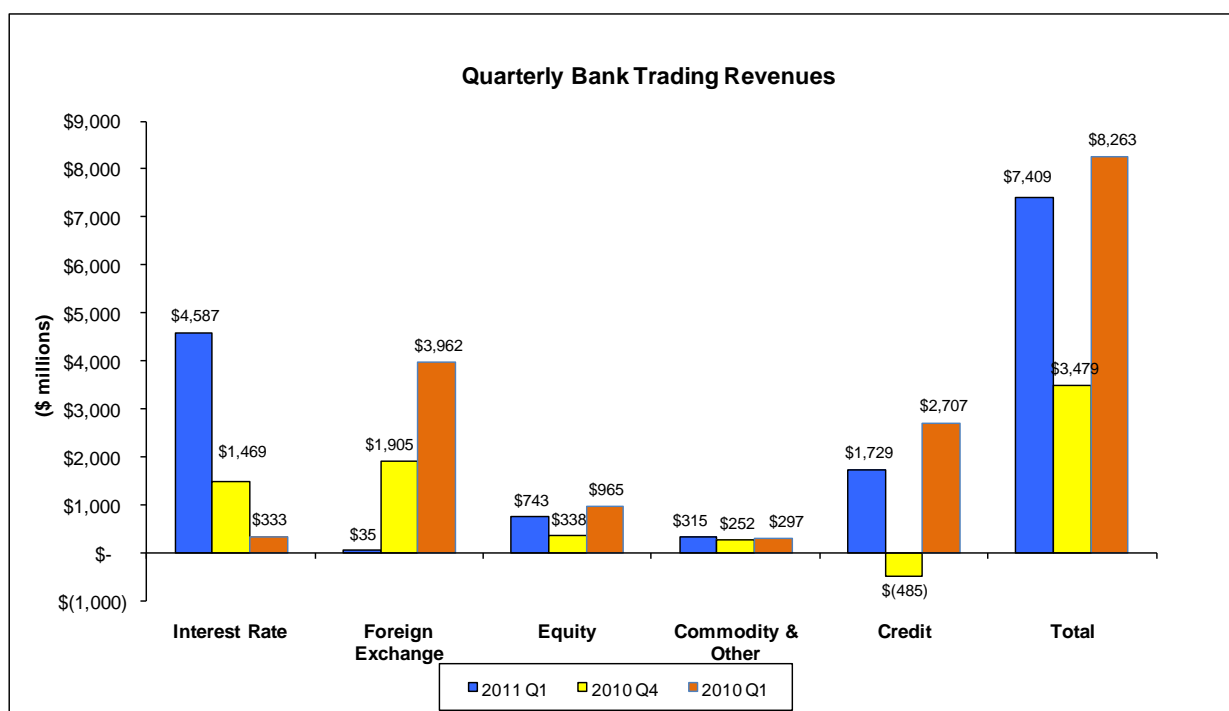
The weaker revenue performance in the first quarter of 2011, compared to the first quarter of 2010, results from the relative absence of write-ups on legacy credit assets. As noted below, this factor is more pronounced at the bank holding company level. Credit trading revenues in the first quarter of 2011 were \$978 million below the first quarter of 2010, more than explaining the \$854 million revenue difference between the two quarters.

### Commercial Bank Trading Revenue

Bank Trading Revenue \$ in millions	Q1 '11	Q4 '10	Change Q1'11 vs. Q4'10	% Change Q1'11 vs. Q4'10	Q1 '10	Change Q1'11 vs. Q1'10	% Change Q1'11 vs. Q1'10
Interest Rate	4,587	1,469	3,118	212%	333	4,255	1279%
Foreign Exchange	35	1,905	(1,870)	-98%	3,962	(3,927)	-99%
Equity	743	338	405	120%	965	(222)	-23%
Commodity & Other	315	252	63	25%	297	18	6%
Credit	1,729	(485)	2,214	457%	2,707	(978)	-36%
<b>Total Trading Revenues</b>	<b>7,409</b>	<b>3,479</b>	<b>3,930</b>	<b>113%</b>	<b>8,263</b>	<b>(854)</b>	<b>-10%</b>

Bank Trading Revenue \$ in millions	2011 Q1	Avg Past 12 Q1's	ALL Quarters Since Q4, 1996			Past 8 Quarters		
			Avg	Hi	Low	Avg	Hi	Low
Interest Rate	4,587	2,409	1,322	9,099	(3,420)	2,015	5,451	(1,188)
Foreign Exchange	35	1,747	1,488	4,261	(1,535)	1,534	4,261	(1,535)
Equity	743	852	391	1,829	(1,229)	352	965	(279)
Commodity & Other	315	194	148	789	(320)	256	446	(25)
Credit*	1,729	N/A	N/A	2,707	(11,780)	1,187	2,707	(485)
<b>Total Trading Revenues</b>	<b>7,409</b>					<b>5,344</b>		

\*Credit trading revenues became reportable in Q1, 2007. Highs and lows are for available quarters only.



Data Source: Call Reports. Note: Beginning 1Q07, credit exposures are broken out as a separate category.

### Holding Company Trading Revenues<sup>1</sup>

To get a more complete picture of trading revenues in the banking system, it is useful to review consolidated holding company trading performance. As illustrated below, consolidated holding company trading revenues of \$20.7 billion in the first quarter of 2011 were 25% lower (\$6.8 billion) than the first quarter of 2010, but 175% higher (\$13.2 billion) than \$7.5 billion in the fourth quarter of 2010. Compared to the fourth quarter, trading revenues were higher across-the-board, led by combined interest rate and FX revenues, which increased \$5.0 billion to \$7.6 billion, and credit revenues, which rose \$4.8 billion to \$5.1 billion.

During the financial crisis, some dealer banks incurred very large losses on certain illiquid credit assets. As the economy recovered, dealers recorded gains as prices on these legacy assets improved. Because legacy assets were largely held in the holding company, the impact on trading revenues over the past several years is more pronounced at the bank holding company than at the insured commercial bank. The relative absence of these write-ups in 2011, compared to both 2009 and 2010, explains the difference in trading revenues in these periods. For example, credit trading revenues of \$5.1 billion in 2011's first quarter were \$7.3 billion less than in the same quarter in 2010, more than explaining the \$6.8 billion difference in trading revenues between the two quarters.

Holding Co. Trading Revenue			Change	% Change		Change	% Change
\$ in millions	Q1 '11	Q4 '10	Q1'11 vs. Q4'10	Q1'11 vs. Q4'10	Q1 '10	Q1'11 vs. Q1'10	Q1'11 vs. Q1'10
Interest Rate	6,893	(1,595)	8,488	532%	2,483	4,410	178%
Foreign Exchange	706	4,194	(3,488)	-83%	5,932	(5,226)	-88%
Equity	5,302	3,035	2,267	75%	4,676	626	13%
Commodity & Other	2,708	1,622	1,086	67%	2,025	683	34%
Credit	5,119	271	4,848	1791%	12,374	(7,255)	-59%
<b>Total HC Trading Revenues</b>	<b>20,728</b>	<b>7,526</b>	<b>13,202</b>	<b>175%</b>	<b>27,489</b>	<b>(6,761)</b>	<b>-25%</b>

<sup>1</sup> The OCC's Quarterly Report on Bank Trading and Derivatives Activities focuses on the activity and performance of insured commercial banks. Discussion of consolidated bank holding company activity and performance is limited to the next three paragraphs, as well as the data in Table 2.

Prior to the financial crisis, bank trading revenues typically ranged from 60-80% of consolidated holding company trading revenues. Since the financial crisis, and the adoption of bank charters by the former investment banks, the percentage of bank trading revenues to consolidated company revenues has fallen into a range of 30-50%. This decline reflects the significant amount of the trading activity by the former investment banks that, while included in holding company results, remains outside the insured commercial bank. More generally, insured commercial banks have more limited legal authorities than do their holding companies, particularly in commodity and equity products.

In the first quarter, bank trading revenues were 36% of consolidated company trading revenues, compared to 46% in the fourth quarter. The decline in the bank contribution to holding company revenues is attributable to stronger equity, credit, and commodity revenue at the consolidated company level. Equity and commodity trading revenues are a much bigger component of trading revenues at the consolidated company than at the bank.

## **Credit Risk**

Credit risk is a significant risk in bank derivatives trading activities. The notional amount of a derivative contract is a reference amount from which contractual payments will be derived, but it is generally not an amount at risk. The credit risk in a derivative contract is a function of a number of variables, such as whether counterparties exchange notional principal, the volatility of the underlying market factors (interest rate, currency, commodity, equity or corporate reference entity), the maturity and liquidity of the contract, and the creditworthiness of the counterparty.

Credit risk in derivatives differs from credit risk in loans due to the more uncertain nature of the potential credit exposure. With a funded loan, the amount at risk is the amount advanced to the borrower. The credit risk is unilateral; the bank faces the credit exposure of the borrower. However, in most derivatives transactions, such as swaps (which make up the bulk of bank derivatives contracts), the credit exposure is bilateral. Each party to the contract may (and, if the contract has a long enough tenor, probably will) have a current credit exposure to the other party at various points in time over the contract's life. Moreover, because the credit exposure is a function of movements in market factors, banks do not know, and can only estimate, how much the value of the derivative contract might be at various points of time in the future.

The first step to measuring credit exposure in derivative contracts involves identifying those contracts where a bank would lose value if the counterparty to a contract defaulted today. The total of all contracts with positive value (i.e., derivatives receivables) to the bank is the gross positive fair value (GPFV) and represents an initial measurement of credit exposure. The total of all contracts with negative value (i.e., derivatives payables) to the bank is the gross negative fair value (GNFV) and represents a measurement of the exposure the bank poses to its counterparties.

\$ in billions	Gross Positive Fair Values				Gross Negative Fair Values			
	Q1 2011	Q4 2010	Change	%Change	Q1 2011	Q4 2010	Change	%Change
<b>Interest Rates</b>	2,784	3,306	(521)	-16%	2,692	3,214	(522)	-16%
<b>FX</b>	458	448	10	2%	449	435	14	3%
<b>Equity</b>	74	67	7	11%	73	69	3	5%
<b>Commodity</b>	69	53	16	30%	70	54	16	29%
<b>Credit</b>	302	324	(22)	-7%	292	310	(18)	-6%
<b>Total</b>	3,687	4,198	(510)	-12%	3,576	4,082	(506)	-12%

Gross positive fair values (i.e., derivatives receivables) declined 12%, or \$510 billion, to \$3.7 trillion in the first quarter. Receivables from interest rate contracts, which make up 76% of gross derivatives receivables (and hence are the dominant source of credit exposure), fell 16%, or \$521 billion, explaining the entire decrease in gross derivatives receivables. Receivables on interest rate derivatives fell due to higher interest rates. Gross negative fair values (i.e., derivatives payables) declined 12%, or \$506 billion, to \$3.6 trillion. A \$522 billion decline in payables on interest rate contracts explains the entire change in derivatives payables.

For a portfolio of contracts with a single counterparty where the bank has a legally enforceable bilateral netting agreement, contracts with negative values may be used to offset contracts with positive values. This process generates a “net” current credit exposure (NCCE), as shown in the example below:

Counterparty A Portfolio	# of Contracts	Value of Contracts	Credit Measure/Metric
Contracts With Positive Value	6	\$500	Gross Positive Fair Value
Contracts With Negative Value	4	\$350	Gross Negative Fair Value
Total Contracts	10	\$150	Net Current Credit Exposure (NCCE) to Counterparty A

A bank’s net current credit exposure across all counterparties will therefore be the sum of the gross positive fair values for counterparties without legally certain bilateral netting arrangements (this may be due to the use of non-standardized documentation or jurisdiction considerations) and the bilaterally netted current credit exposure for counterparties with legal certainty regarding the enforceability of netting agreements.

Net current credit exposure is the primary metric used by the OCC to evaluate credit risk in bank derivatives activities. NCCE for U.S. commercial banks decreased 6% (\$23 billion) to \$353 billion in the first quarter, as gross receivables (GPFV) fell faster than netting benefits. NCCE peaked at \$800 billion at the end of 2008, when, during the financial crisis, interest rates were very low and credit spreads were very high. Legally enforceable netting agreements allowed banks to reduce GPFV exposures by 90.4% in the first quarter, the second consecutive decline in this metric since it peaked at 92.1% set in the third quarter of 2010.

\$ in billions	Q111	Q410	Change	%
Gross Positive Fair Value (GPFV)	3,687	4,198	(510)	-12%
Netting Benefits	3,335	3,822	(487)	-13%
Netted Current Credit Exposure (NCCE)	353	375	(23)	-6%
Potential Future Exposure (PFE)	814	764	50	6%
Total Credit Exposure (TCE)	1,166	1,140	26	2%
Netting Benefit %	90.4%	91.1%	-0.6%	-1%
10 Year Interest Swap Rate	3.57%	3.41%	0.16%	5%
Dollar Index Spot	75.9	79.0	(3.2)	-4%
Credit Derivative Index - North America Inv Grade	95.5	85.2	10.3	12%
Credit Derivative Index - High Volatility	154.1	132.5	21.6	16%
Russell 3000 Index Fund (RAY)	793.9	749.5	44	6%
Dow Jones-UBS Commodity Index (DJUBS)	169.6	162.4	7	4%

Note: Numbers may not add due to rounding.

The second step in evaluating credit risk involves an estimation of how much the value of a given derivative contract might change in the bank’s favor over the remaining life of the contract; this is referred to as the “potential future exposure” (PFE). PFE increased 6% in the first quarter to \$814 billion, largely due to notional increases in credit and interest rate derivatives. The total credit exposure (PFE plus the net current credit exposure) increased 2% in the first quarter to \$1.2 trillion.

The distribution of NCCE in the banking system is concentrated in banks/securities firms (59%) and corporations (35%) Exposure to hedge funds, sovereign governments and monoline financial firms is very small (6% in total). However, the sheer size of aggregate counterparty exposures results in the potential for major losses even in sectors where exposure is a small percentage of the total. For example, notwithstanding the 1% share of NCCE to monolines, banks suffered material losses on these exposures during the credit crisis.

Net Current Credit Exposure By Counterparty Type as a % of Total NCCE	Banks & Securities Firms	Monoline Financial Firms	Hedge Funds	Sovereign Governments	Corp and All Other Counterparties	Total
Total Commercial Banks	59%	1%	2%	3%	35%	100%
Top 5 Commercial Banks	62%	0%	2%	4%	32%	100%

A more risk sensitive measure of credit exposure would also consider the value of collateral held against counterparty exposures. Commercial banks with total assets greater than \$10 billion report the fair value of collateral held against various classifications of counterparty exposure.

Banks held collateral against 72% of total NCCE at the end of the first quarter, the same as in the fourth quarter of 2010. Credit exposures to banks/securities firms and hedge funds are very well secured. Banks held collateral against 93% of their current exposure to banks and securities firms, unchanged from the fourth quarter, and 302% (vs. 246% in Q4 '10) of their exposure to hedge funds. The high coverage of hedge fund exposures occurs because banks take "initial margin" on transactions with hedge funds, in addition to fully securing any current credit exposure. Coverage of corporate, monoline and sovereign exposures is much less.

FV of Collateral to Net Current Credit Exposure	Banks & Securities Firms	Monoline Financial Firms	Hedge Funds	Sovereign Governments	Corp and All Other Counterparties	Overall FV/NCCE
Total Commercial Banks	93%	1%	302%	5%	36%	72%

Collateral quality held by banks is very high and liquid, with 79% held in cash (both U.S. dollar and non-dollar), and an additional 8% held in U.S. Treasuries and government agencies.

Fair Value of Collateral	Cash U.S. Dollar	Cash Other	U.S. Treas Securities	U.S. Gov't Agency	Corp Bonds	Equity Securities	All Other Collateral	Total
Collateral Composition (%)	51.1%	28.1%	2.3%	5.3%	1.3%	0.9%	11.0%	100.0%

Consistent with the stabilized economy and improving credit markets, key derivative credit performance metrics improved in the first quarter, as both past due derivative contracts and charge-offs declined. The fair value of derivatives contracts past due 30 days or more declined 22% to \$42 million, or 0.01% of NCCE. Banks charged-off \$74 million in derivatives receivables in the first quarter, down from \$111 million in the fourth quarter. In the first quarter, 24 banks reported charge-offs of derivatives exposures, up from 15 in the fourth quarter. Charge-offs peaked at a record \$847 million in the fourth quarter of 2008, at the height of the financial crisis. Charge-offs in the first quarter of 2011 represented 0.02% of the net current credit exposure from derivative contracts, down from the 0.03% from the fourth quarter of 2010. [See Graph 5c.] For comparison purposes, Commercial and Industrial (C&I) loan net charge-offs fell 25%, or \$997 million, in the first quarter. Net C&I charge-offs were 0.27% of total C&I loans in the first quarter, down from 0.36% in the fourth quarter.

The low incidence of charge-offs on derivatives relative to C&I exposures (0.02% vs. 0.27%) results from two main factors: 1) the credit quality of the typical derivatives counterparty is higher than the credit quality of the typical C&I borrower; and 2) most of the large credit exposures from derivatives, whether from other dealers, large non-dealer banks, or hedge funds are collateralized daily, typically by cash and/or government securities.

## **Market Risk**

Banks control market risk in trading operations primarily by establishing limits against potential losses. Value at Risk (VaR) is a statistical measure that banks use to quantify the maximum expected loss, over a specified horizon and at a certain confidence level, in normal markets. It is important to emphasize that VaR is not the maximum potential loss; it provides a loss estimate at a specified confidence level. A VaR of \$50 million at 99% confidence measured over one trading day, for example, indicates that a trading loss of greater than \$50 million in the next day on that portfolio should occur only once in every 100 trading days under normal market conditions. Since VaR does not measure the maximum potential loss, banks stress test trading portfolios to assess the potential for loss beyond the VaR measure. Banks and supervisors have been working to expand the use of stress analyses to complement the VaR risk measurement process that is typically used when assessing a bank's exposure to market risk.

\$ in millions	JPMorgan Chase & Co.	Citigroup Inc.	Bank of America Corp.	The Goldman Sachs Group	Morgan Stanley
Average VaR Q1'11	\$64	\$195	\$184	\$113	\$121
Average VaR Q1'10	\$72	\$200	\$276	\$161	\$143
Change in Avg VaR Q1'11 vs Q1'10	(\$8)	(\$5)	(\$92)	(\$48)	(\$22)
% Change in Avg VaR Q1'11 vs Q1'10	-11%	-3%	-33%	-30%	-15%
03-31-11 Equity Capital	\$180,598	\$171,037	\$230,876	\$72,469	\$58,186
2010 Net Income	\$17,370	\$10,602	(\$2,238)	\$8,354	\$4,703
Avg VaR Q1'11 / Equity	0.04%	0.1%	0.1%	0.2%	0.2%
Avg VaR Q1'11 / 2010 Net Income	0.4%	1.8%	-8.2%	1.4%	2.6%

Data Source: 10K & 10Q SEC Reports.

The large trading banks disclose average VaR data in published financial reports. To provide perspective on the market risk of trading activities, it is useful to compare the VaR numbers over time, and to equity capital and net income. As shown in the table above, market risks reported by the five largest trading banks, as measured by VaR, are small as a percentage of their capital. Because of mergers, and VaR measurement systems incorporating higher volatility price changes throughout the credit crisis (compared to the very low volatility environment prior to the crisis), bank VaR measures had generally increased throughout the credit crisis. Recently, however, as more normal market conditions emerged and volatility declined, bank VaR measures have trended lower.

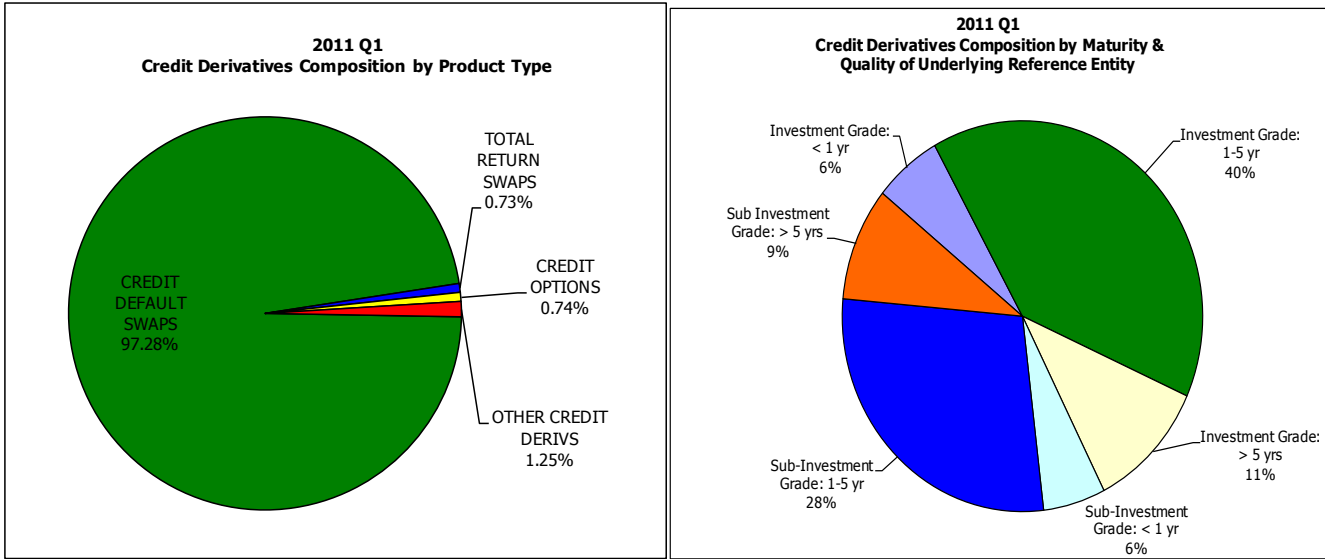
Because of methodological differences in calculating VaR, readers are cautioned that a higher VaR figure at a particular bank may not necessarily imply that the bank has more trading risk than another bank with a lower VaR. For example, JP Morgan, Goldman Sachs and Morgan Stanley calculate VaR using a 95% confidence interval. If those firms used a 99% confidence interval, as does Bank of America and Citigroup, their VaR estimates would be meaningfully higher. The data series used to measure risk also is an important factor in the calculated risk measure. Firms using a longer period over which to measure risk may include the higher volatility period of the financial crisis, and therefore their measured VaR will be higher than firms that use a less volatile data series. Indeed, one major reason for the decline in VaR at large trading firms is the lower volatility environment that has prevailed since the end of the financial crisis. The VaR measure for a single portfolio of exposures will be different if the time period used to measure risk is not the same.

To test the effectiveness of VaR measurement systems, trading institutions track the number of times that daily losses exceed VaR estimates. Under the Market Risk Rule that establishes regulatory capital requirements for U.S. commercial banks with significant trading activities, a bank's capital requirement for market risk is based on its VaR measured at a 99% confidence level and assuming a 10-day holding period. Banks back-test their VaR measure by comparing the actual daily profit or loss to the VaR measure. The results of the back-test determine the size of the multiplier applied to the VaR measure in the risk-based capital calculation. The multiplier adds a safety factor to the capital requirements. An "exception" occurs when a dealer has a daily loss in excess of its VaR measure. Some banks disclose the number of such "exceptions" in their published financial reports. Because of the unusually high market volatility and large write-downs in CDOs during the financial crisis, as well as poor market liquidity, a number of banks experienced back-test exceptions and therefore an increase in their capital multiplier.

## **Credit Derivatives**

Credit derivatives rose 5.3% in the first quarter to \$14.9 trillion. Credit derivatives outstanding remain below the peak of \$16.4 trillion in the first quarter of 2008. From year-end 2003 to 2008, credit derivative contracts grew at a 100% compounded annual growth rate. Industry efforts to eliminate offsetting trades ("trade compression"), as well as reduced demand for structured products, has led to a decline in credit derivative notionals. Tables 11 and 12 provide detail on individual bank holdings of credit derivatives by product and maturity, as well as the credit quality of the underlying reference entities. As shown in the first chart below, credit default swaps are the dominant product at 97% of all credit derivatives notionals. [See charts below, Tables 11 and 12, and Graph 10.]





Data Source: Call Reports. Note: Beginning 1Q07, credit exposures are broken out as a separate category.

Contracts referencing investment grade entities with maturities from 1-5 years represent the largest segment of the market at 40% of all credit derivatives notionals, flat from the fourth quarter of 2010. Contracts of all tenors that reference investment grade entities are 57% of the market, compared to 56% in the fourth quarter. [See chart on right above.]

The notional amount for the 36 U.S. commercial banks that sold credit protection (i.e., assumed credit risk) was \$7.4 trillion, up 5.4% (\$376 billion) from the fourth quarter. The notional amount for the 31 banks that purchased credit protection (i.e., hedged credit risk) was \$7.5 trillion, an increase of 5.2% (\$372 billion). [See Tables 1, 3, 11 and 12 and Graphs 2, 3 and 4.]

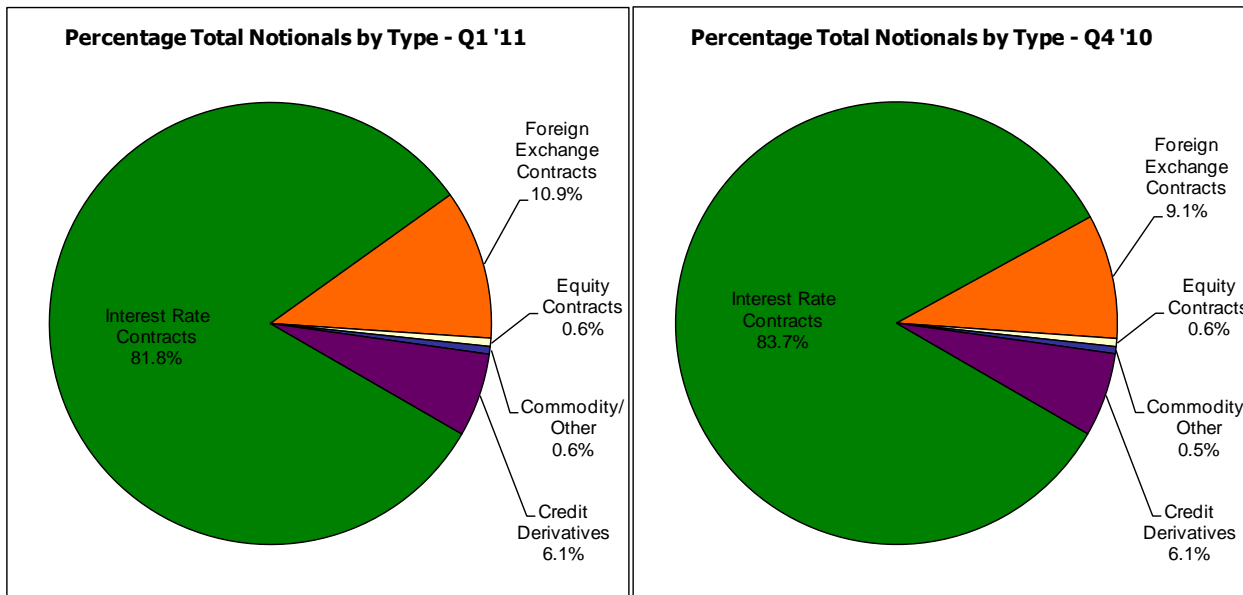
**Notionals**

Changes in notional volumes are generally reasonable reflections of business activity, and therefore can provide insight into potential revenue and operational issues. However, the notional amount of derivatives contracts does not provide a useful measure of either market or credit risks.

The notional amount of derivatives contracts held by U.S. commercial banks in the first quarter increased by \$12.8 trillion (5.5%) to \$244 trillion from fourth quarter 2010. During 2010 derivative notionals increased 9%.

The five banks with the most derivatives activity hold 96% of all derivatives, while the largest 25 banks account for nearly 100% of all contracts. [See Tables 3, 5 and Graph 4.]





Data Source: Call Reports.

Note: Beginning 1Q07, credit exposures are broken out as a separate category.

Interest rate contracts comprise 82% of total derivatives. FX and credit derivatives are 11% and 6%, respectively, of total notionals.

\$ in billions	Q1 '11	Q4 '10	\$ Change	% Change	% of Total Derivatives
Interest Rate Contracts	199,532	193,482	6,050	3%	81.8%
Foreign Exchange Contracts	26,712	20,990	5,722	27%	10.9%
Equity Contracts	1,471	1,364	107	8%	0.6%
Commodity/Other	1,377	1,195	182	15%	0.6%
Credit Derivatives	14,899	14,150	748	5.3%	6.1%
<b>Total</b>	<b>243,991</b>	<b>231,181</b>	<b>12,810</b>	<b>5.5%</b>	<b>100%</b>

Swap contracts, at 63% of total notional derivatives, continue to represent the bulk of derivative contracts.

\$ in billions	Q1'11	Q4'10	\$ Change	% Change	% of Total Derivatives
Futures & Forwards	39,081	35,709	3,372	9%	16%
Swaps	152,736	149,247	3,489	2%	63%
Options	37,275	32,075	5,200	16%	15%
Credit Derivatives	14,899	14,150	748	5%	6%
<b>Total</b>	<b>243,991</b>	<b>231,181</b>	<b>12,810</b>	<b>5.5%</b>	<b>100%</b>

## **GLOSSARY OF TERMS**

**Bilateral Netting:** A legally enforceable arrangement between a bank and a counterparty that creates a single legal obligation covering all included individual contracts. This means that a bank's receivable or payable, in the event of the default or insolvency of one of the parties, would be the net sum of all positive and negative fair values of contracts included in the bilateral netting arrangement.

**Credit Derivative:** A financial contract that allows a party to take, or reduce, credit exposure (generally on a bond, loan or index). Our derivatives survey includes over-the-counter (OTC) credit derivatives, such as credit default swaps, total return swaps, and credit spread options.

**Derivative:** A financial contract whose value is derived from the performance of underlying market factors, such as interest rates, currency exchange rates, commodity, credit, and equity prices. Derivative transactions include a wide assortment of financial contracts including structured debt obligations and deposits, swaps, futures, options, caps, floors, collars, forwards and various combinations thereof.

**Gross Negative Fair Value:** The sum total of the fair values of contracts where the bank owes money to its counterparties, without taking into account netting. This represents the maximum losses the bank's counterparties would incur if the bank defaults and there is no netting of contracts, and no bank collateral was held by the counterparties. Gross negative fair values associated with credit derivatives are included.

**Gross Positive Fair Value:** The sum total of the fair values of contracts where the bank is owed money by its counterparties, without taking into account netting. This represents the maximum losses a bank could incur if all its counterparties default and there is no netting of contracts, and the bank holds no counterparty collateral. Gross positive fair values associated with credit derivatives are included.

**Net Current Credit Exposure (NCCE):** For a portfolio of derivative contracts, NCCE is the gross positive fair value of contracts less the dollar amount of netting benefits. On any individual contract, current credit exposure (CCE) is the fair value of the contract if positive, and zero when the fair value is negative or zero. NCCE is also the net amount owed to banks if all contracts were immediately liquidated.

**Notional Amount:** The nominal or face amount that is used to calculate payments made on swaps and other risk management products. This amount generally does not change hands and is thus referred to as notional.

**Over-the-Counter Derivative Contracts:** Privately negotiated derivative contracts that are transacted off organized exchanges.

**Potential Future Exposure (PFE):** An estimate of what the current credit exposure (CCE) could be over time, based upon a supervisory formula in the agencies' risk-based capital rules. PFE is generally determined by multiplying the notional amount of the contract by a credit conversion factor that is based upon the underlying market factor (e.g., interest rates, commodity prices, equity prices, etc.) and the contract's remaining maturity. However, the risk-based capital rules permit banks to adjust the formulaic PFE measure by the "net to gross ratio," which proxies the risk-reduction benefits attributable to a valid bilateral netting contract. PFE data in this report uses the amounts upon which banks hold risk-based capital.

**Total Credit Exposure (TCE):** The sum total of net current credit exposure (NCCE) and potential future exposure (PFE).

**Total Risk-Based Capital:** The sum of tier 1 plus tier 2 capital. Tier 1 capital consists of common shareholders' equity, perpetual preferred shareholders' equity with noncumulative dividends, retained earnings, and minority interests in the equity accounts of consolidated subsidiaries. Tier 2 capital consists of subordinated debt, intermediate-term preferred stock, cumulative and long-term preferred stock, and a portion of a bank's allowance for loan and lease losses.